

## REMARKS

The Final Office Action dated December 16, 2003, has been received and reviewed.

Claims 1 through 20 are currently pending in the above-referenced application.

Claim 10 has been withdrawn from consideration as being directed to a non-elected species of invention.

Each of claims 1 through 9 and 11 through 20 has been considered and currently stands rejected.

Reconsideration of the above-referenced application is respectfully requested.

### Objection to the Abstract

The Abstract has been objected to for “lack[ing] steps.”

The objection to the Abstract is not understood. All but the first sentence of the abstract refer to methods, as are recited in the pending claims of the above-referenced application.

Accordingly, withdrawal of the objection to the Abstract is respectfully requested.

### Rejections Under 35 U.S.C. § 102(b)

Claims 1 through 7 stand rejected under 35 U.S.C. § 102(b) for reciting subject matter which is purportedly anticipated by that described in U.S. Patent 3,612,955 to Butherus et al. (hereinafter “Butherus”).

Applicant asserts that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Butherus describes a circuit board that includes magnetized traces and a packaged semiconductor device that includes leads that are either magnetized or formed from a material which is attracted to the source of a magnetic field. Col. 2, lines 59-75. The traces and leads are magnetized in such a way that, with rough alignment of the packaged semiconductor device over

the circuit board, the magnetized leads will automatically align with their corresponding, complementarily magnetized traces. Col. 4, line 69, to col. 5, line 7.

Once the leads of the semiconductor device package are aligned with corresponding traces or terminals on the circuit board, the leads may be secured and electrically connected to their corresponding traces or terminals by known processes, such as by thermocompression bonding. Col. 2, lines 47-59.

Independent claim 1, as proposed to be amended, is drawn to a method for establishing a temporary electrical contact with at least one semiconductor device. Temporary electrical contact is established in accordance with amended independent claim 1 by magnetically drawing at least one of a first member and a contact toward the other of the first member and the contact. As the temporary electrical contact is maintained, current may flow from at least one of the first member and the contact to the other of the contact and the first member.

Butherus does not expressly or inherently describe that current may flow from the leads to the terminals or vice-versa while a temporary, magnetic, electrical connection is maintained between the leads and the terminals. Rather, the description of Butherus is limited to forming permanent (e.g., thermocompression) bonds between the terminals and leads prior to permitting electrical currents to flow from the leads to the terminals and from the terminals to the leads. *See* col. 2, lines 47-59.

Further, while Butherus describes that leads of a packaged semiconductor device may be magnetically attracted to corresponding traces or terminals of a circuit board, Butherus lacks any express or inherent description that the magnetic attraction of the leads to the terminals is sufficient to electrically connect the leads to the traces or terminals. To the contrary, Butherus describes that additional securing of leads to traces or terminals, such as by thermocompression, is necessary. Col. 2, lines 47-59.

It is, therefore, respectfully submitted that Butherus does not anticipate each and every element of amended independent claim 1, as is required to maintain a rejection under 35 U.S.C. § 102(b). Accordingly, it is respectfully submitted that, under 35 U.S.C. § 102(b), amended independent claim 1 is drawn to subject matter which is allowable over that described in Butherus.

Claims 2 through 7 are each allowable, among other reasons, for depending either directly or indirectly from claim 1, which is allowable.

Claim 4 is further allowable since each of the electrical connectors of Butherus, which are presumed to be the leads of the packaged semiconductor device, comprises only a single element. Thus, Butherus includes no express or inherent identical description of the element of the claimed invention calling for “positioning a second member of [an] electrical connector opposite [a] first member” of the electrical connector.

Claim 5 depends directly from claim 4 and is also allowable because Butherus neither expressly nor inherently describes that oppositely positioned first and second members of an electrical connector may be magnetically drawn to one another. Instead, the description of Butherus is limited to directly magnetically attracting a single-element lead to a trace or terminal.

Claim 6, which also depends directly from claim 4, is additionally allowable because Butherus does not expressly or inherently describe securing both first and second members of an electrical connector to a substrate by magnetically attracting at least the first member of the electrical connector to a contact carried by the substrate. Rather, Butherus merely describes attracting single-element leads to corresponding magnetic traces or terminals.

For these reasons, it is respectfully requested that the 35 U.S.C. § 102(b) rejections of claims 1 through 7 be withdrawn and that each of these claims be allowed.

#### **Rejections Under 35 U.S.C. § 103(a)**

Claims 8, 9, and 11 through 20 stand rejected under 35 U.S.C. § 103(a) for reciting subject matter which is assertedly unpatentable over the subject matter taught in Butherus, in view of the Official Notice that the Office has taken.

The standard for establishing and maintaining a rejection under 35 U.S.C. § 103(a) is set forth in M.P.E.P. § 706.02(j), which provides:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference

(or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The teachings or suggestions of Butherus are summarized above.

The Office has taken official notice of two teachings. First, the Office has taken official notice that "it is well known in the art to provide ground and power to electronic components to energize them." Final Office Action dated December 15, 2003, page 3. Second, the Office has taken official notice that, "during burn-in testing[,] [sic] heat is provide[d] [sic] either cyclically or variously to purposely fail the [burned-in] component." *Id.*

It is respectfully submitted that a *prima facie* case of obviousness under 35 U.S.C. § 103(a) has not been established against any of claims 8, 9, or 11 through 20 since Butherus and the subject matter for which official notice has been taken do not teach or suggest each and every limitation set forth in any of claims 8, 9, or 11 through 20.

Independent claim 8, as proposed to be amended, recites a method for stress testing a plurality of semiconductor devices that are carried upon a common substrate and that are in communication with common ground and power contacts. The method of amended independent claim 8 includes establishing temporary electrical contact between a first member of an electrical connector and at least one common contact, with at least one of the first member and the at least one common contact being magnetically drawn toward the other to maintain the temporary electrical contact. While the temporary electrical contact is maintained, current is permitted to flow from at least one of the first member and the contact to the other of the contact and the first member.

It is respectfully submitted that Butherus lacks any teaching or suggestion that one of a first member of an electrical connector and a contact may be magnetically drawn to the other to maintain a temporary electrical connection therebetween. Rather, the teachings of Butherus are limited to generating a sufficient magnetic field to properly align leads of a packaged semiconductor device with corresponding traces or terminals of a circuit board. *See, e.g.*, col. 4, line 69, to col. 5, line 7.

In addition, Butherus does not teach or suggest that an electric current may be permitted to flow from at least one of the leads and the terminals thereof to the other of the terminals and the leads thereof while temporary electrical contact is being maintained. Instead, the teachings of Butherus are limited to forming permanent electrical connections between leads and terminals before permitting electric current to flow from the terminals to the leads or vice-versa. *See* col. 2, lines 47-59.

Moreover, Butherus includes no teaching or suggestion that temporary electrical contact may be established between a first member of an electrical connector and a contact, such as a power contact or a ground contact, which is *common to* a plurality of semiconductor devices. Nor has any art been cited in the Office Action which teaches or suggests that temporary electrical contact may be established between a first member of an electrical connector and a contact which is common to a plurality of semiconductor devices during stress testing.

Further, the mere fact that electrical connections are made during stress testing does not inherently, or necessarily, lead to the conclusion that magnetic attraction of the type taught in Butherus would be adequate for establishing electrical connections that will withstand stress testing conditions, nor would one of ordinary skill in the art have any reason to expect that the type of magnetic attraction taught in Butherus could be successfully used for such a purpose.

For these reasons, it is respectfully submitted that the teachings of Butherus do not support a *prima facie* case of obviousness under 35 U.S.C. § 103(a) against amended independent claim 8. Therefore, under 35 U.S.C. § 103(a), independent claim 8 is allowable over both the teachings of Butherus and the teachings of official notice in the Office Action.

Each of claims 9 and 11 through 20 is allowable, among other reasons, for depending either directly or indirectly from claim 8, which is allowable.

Claim 11 is further allowable since each of the electrical connectors of Butherus, which are presumed to be the leads of the packaged semiconductor device, comprises only a single element. Thus, Butherus includes no teaching or suggestion of “positioning a second member of [an] electrical connector opposite [a] first member” of the electrical connector.

Claim 12 depends directly from claim 11 and is also allowable because Butherus neither teaches nor suggests that oppositely positioned first and second members of an electrical

connector may be drawn to one another. Instead, the teachings or suggestions of Butherus are limited to attracting a single-element lead directly to a trace or terminal.

Claim 13, which depends directly from claim 12, is additionally allowable because Butherus includes no teaching or suggestion that first and second members of an electrical connector may be magnetically drawn to one another.

Claim 14 is further allowable since Butherus does not teach or suggest *securing* a first member of an electrical connector to a contact. Rather, Butherus merely teaches attracting single-element leads to corresponding magnetic traces or terminals. Securing of the leads to the traces or terminals is then effected by conventional bonding techniques, such as thermocompression. Col. 2, lines 47-59.

Claim 15 is additionally allowable because Butherus neither teaches nor suggests securing a first member of an electrical connector in position relative to a substrate. Again, Butherus teaches that any such securing is effected by conventional bonding techniques, such as thermocompression.

In view of the foregoing, it is respectfully requested that the 35 U.S.C. § 103(a) rejections of claims 8, 9, and 11 through 20 be withdrawn.

#### **Election of Species Requirement**

As claim 8 is allowable and remains generic to all three species of invention that have been identified by the Office, as do claims 9 through 20, it is respectfully requested that claim 10 be returned to consideration and allowed.

#### **ENTRY OF AMENDMENTS**

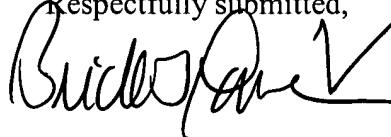
It is respectfully submitted that the amendments that are proposed herein should be entered, as this amendment is timely filed, as the amendment clearly places the application in condition for allowance, as no amendment introduces new matter into the above-referenced application under 35 U.S.C. § 132 and as the amendment does not necessitate a further search or

consideration. In the event that the proposed amendments are not entered, entry thereof is respectfully requested if a Notice of Appeal is filed in the above-referenced application.

### CONCLUSION

It is respectfully submitted that each of claims 1 through 20 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



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